IN THE CLAIMS

Please amend the claims as follows:

Claim 1. (Original) A steering apparatus for a vehicle having a steering wheel, the apparatus comprising:

a steering mechanism that is mechanically separate from the steering wheel, wherein the steering mechanism includes a steering rod and a steering actuator, wherein the steering actuator drives the steering rod;

a steering wheel position detector for detecting a steering position of the steering wheel;

a control system that determines a target steered position of the steering rod based on the detected steering position of the steering wheel, wherein the control system performs feedback control of the steering actuator based on the target steered position and an actual steered position of the steering rod;

a reaction force actuator, wherein the reaction force actuator applies reaction force to the steering wheel based on force that the steering mechanism receives from a road; and

an elastic member that couples the reaction force actuator to the steering wheel, wherein the elastic member is located between the steering wheel and the reaction force actuator, and wherein, with respect to the elastic member, a side closer to the steering wheel is referred to as a primary side, and a side closer to the reaction force actuator is referred to as a secondary side,

wherein the steering wheel position detector is located at the secondary side.

Claim 2. (Original) The apparatus according to claim 1, wherein a speed reducing mechanism is located between the reaction force actuator and the elastic member, and wherein the speed reducing mechanism decelerates rotation of the reaction force actuator.

Claim 3. (Cancelled).

Claim 4. (Original) The apparatus according to claim 2, wherein the steering wheel position detector detects as the steering wheel position a rotation angle of a portion of the elastic member that is close to the speed reducing mechanism.

Claims 5-6. (Cancelled).

Claim 7. (Original) The apparatus according to claim 1, further comprising a torque detector that detects elastic deformation of the elastic member, thereby obtaining steering torque applied to the steering wheel, wherein the object of detection by the steering wheel position detector is a portion that is closer to the secondary side than the torque detector is to the secondary side.

Claim 8. (Original) The apparatus according to claim 1, wherein the elastic member is a torsion bar.

Claim 9. (Cancelled).

Claim 10. (Original) A steering apparatus for a vehicle having a steering wheel, the apparatus comprising:

a steering mechanism that is mechanically separate from the steering wheel, wherein the steering mechanism includes a steered wheel and a steering actuator, wherein the steering actuator drives the steered wheel;

a steering wheel angle detector for detecting a steering angle of the steering wheel;

a control system that determines a target steered angle of the steered wheel based on the detected steering angle of the steering wheel, wherein the control system performs feedback control of the steering actuator based on the target steered angle and an actual steered angle of the steered wheel;

a reaction force actuator, wherein the reaction force actuator applies reaction force to the steering wheel based on load that the steering actuator receives from a road through the steered wheel; and

an elastic member that couples the reaction force actuator to the steering wheel; and

a torque detector that detects elastic deformation of the elastic member, thereby obtaining steering torque applied to the steering wheel,

wherein the object of detection by the steering wheel angle detector is a portion that is closer to the reaction force actuator than the torque detector is to the reaction force actuator.

Claim 11. (New) A steering apparatus for a vehicle having a steering wheel, the apparatus comprising:

a steering mechanism that is mechanically separate from the steering wheel, wherein the steering mechanism includes a steering rod and a steering actuator, wherein the steering actuator drives the steering rod;

a steering wheel position detector for detecting a steering position of the steering wheel;

a control system that determines a target steered position of the steering rod based on the detected steering position of the steering wheel, wherein the control system performs feedback control of the steering actuator based on the target steered position and an actual steered position of the steering rod;

a reaction force actuator, wherein the reaction force actuator applies reaction force to the steering wheel based on force that the steering mechanism receives from a road; and

an elastic member that couples the reaction force actuator to the steering wheel, wherein the elastic member is located between the steering wheel and the reaction force actuator, and wherein, with respect to the elastic member, a side closer to the steering wheel is referred to as a primary side, and a side closer to the reaction force actuator is referred to as a secondary side,

wherein the steering wheel position detector is located at the secondary side, wherein a speed reducing mechanism is located between the reaction force actuator and the elastic member, wherein the speed reducing mechanism decelerates rotation of the reaction force actuator, and wherein the steering wheel position detector is located between the elastic member and the speed reducing mechanism.

Claim 12. (New) A steering apparatus for a vehicle having a steering wheel, the apparatus comprising:

a steering mechanism that is mechanically separate from the steering wheel, wherein the steering mechanism includes a steering rod and a steering actuator, wherein the steering actuator drives the steering rod;

a steering wheel position detector for detecting a steering position of the steering wheel;

a control system that determines a target steered position of the steering rod based on the detected steering position of the steering wheel, wherein the control system performs feedback control of the steering actuator based on the target steered position and an actual steered position of the steering rod;

a reaction force actuator, wherein the reaction force actuator applies reaction force to the steering wheel based on force that the steering mechanism receives from a road; and

an elastic member that couples the reaction force actuator to the steering wheel, wherein the elastic member is located between the steering wheel and the reaction force actuator, and wherein, with respect to the elastic member, a side closer to the steering wheel is referred to as a primary side, and a side closer to the reaction force actuator is referred to as a secondary side,

wherein the steering wheel position detector is located at the secondary side, wherein a speed reducing mechanism is located between the reaction force actuator and the elastic member, wherein the speed reducing mechanism decelerates rotation of the reaction force actuator, wherein the steering wheel position detector detects as the steering wheel position a rotation angle of a portion of the elastic member that is close to the speed reducing mechanism, and wherein the elastic member has a portion coupled to the speed reducing mechanism, and wherein the steering wheel position sensor detects a rotation angle of the coupled portion.

Claim 13. (New) A steering apparatus for a vehicle having a steering wheel, the apparatus comprising:

a steering mechanism that is mechanically separate from the steering wheel, wherein the steering mechanism includes a steering rod and a steering actuator, wherein the steering actuator drives the steering rod;

a steering wheel position detector for detecting a steering position of the steering wheel;

a control system that determines a target steered position of the steering rod based on the detected steering position of the steering wheel, wherein the control system performs

feedback control of the steering actuator based on the target steered position and an actual steered position of the steering rod;

a reaction force actuator, wherein the reaction force actuator applies reaction force to the steering wheel based on force that the steering mechanism receives from a road; and

an elastic member that couples the reaction force actuator to the steering wheel, wherein the elastic member is located between the steering wheel and the reaction force actuator, and wherein, with respect to the elastic member, a side closer to the steering wheel is referred to as a primary side, and a side closer to the reaction force actuator is referred to as a secondary side,

wherein the steering wheel position detector is located at the secondary side, wherein a speed reducing mechanism is located between the reaction force actuator and the elastic member, wherein the speed reducing mechanism decelerates rotation of the reaction force actuator, and wherein the steering wheel position detector detects a rotation angle of an output shaft of the reaction force actuator.

Claim 14. (New) A steering apparatus for a vehicle having a steering wheel, the apparatus comprising:

a steering mechanism that is mechanically separate from the steering wheel, wherein the steering mechanism includes a steering rod and a steering actuator, wherein the steering actuator drives the steering rod;

a steering wheel position detector for detecting a steering position of the steering wheel;

a control system that determines a target steered position of the steering rod based on the detected steering position of the steering wheel, wherein the control system performs

feedback control of the steering actuator based on the target steered position and an actual steered position of the steering rod;

a reaction force actuator, wherein the reaction force actuator applies reaction force to the steering wheel based on force that the steering mechanism receives from a road; and

an elastic member that couples the reaction force actuator to the steering wheel, wherein the elastic member is located between the steering wheel and the reaction force actuator, and wherein, with respect to the elastic member, a side closer to the steering wheel is referred to as a primary side, and a side closer to the reaction force actuator is referred to as a secondary side,

wherein the steering wheel position detector is located at the secondary side, and wherein the steering wheel position detector detects a rotation angle of an output shaft of the reaction force actuator.